## **DEFENSE AUTHORIZATION/F-22 Limitations**

SUBJECT: National Defense Authorization Act for fiscal year 1999 . . . S. 2057. Bumpers amendment No. 3012.

## **ACTION: AMENDMENT REJECTED, 19-73**

SYNOPSIS: As reported, S. 2057, the National Defense Authorization Act for fiscal year 1999, will authorize \$270.6 billion in budget authority for national defense programs (this amount is equal to the requested level, and is in accordance with the budget agreement of last year). In real terms, spending will be \$2.9 billion less than last year. As a percentage of gross domestic product (GDP), defense spending will be just 3.1 percent, which will be the lowest level of defense spending since 1940. Defense spending has declined steadily since 1986, when it was 6.5 percent of GDP.

**The Bumpers amendment** would prohibit advance procurement for the 6 Lot II F-22 aircraft until 30 days after the Defense Department had certified to the congressional defense committees that the Air Force had completed 601 hours of flight testing of F-22 aircraft.

## **Those favoring** the amendment contended:

The Air Force plans to spend \$62 billion to buy 329 F-22 fighter aircraft. We have tried to kill this plan for several years but have failed. We still think that this new airplane is totally unnecessary to meet our defense needs, and we still think that it is prohibitively and ridiculously expensive, but we now accept that we will be unable to stop its production. The amendment we have offered today, therefore, would not try to kill the program, but would try to make sure that this new airplane actually works as advertised. A standard military procurement rule has always been "fly before you buy." Thus, before the United States bought the first F-15 it underwent 975 hours of flight testing. Before it bought a single F-16 it was tested for 1,115 hours. Before it bought the F-18 it was tested 1,418 hours. Testing of the F-18E/F took a record 2,500 hours because a design flaw was discovered during testing, and it took a long time to correct that flaw. In 1994, the Air Force and Lockheed Martin, the plane's producer, announced

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<b>YEAS</b> (19)		NAYS (73)			NOT VOTING (8)	
Republicans	Democrats (16 or 40%)	Republicans (49 or 94%)		Democrats (24 or 60%)	Republicans Democrats	
(3 or 6%)					(3)	(5)
Grams Grassley Jeffords	Boxer Bryan Bumpers Byrd Durbin Feingold Feinstein Harkin Johnson Kennedy Kerry Kohl Lautenberg Leahy Moseley-Braun Wellstone	Abraham Allard Ashcroft Bennett Bond Brownback Burns Campbell Chafee Coats Cochran Collins Coverdell Craig D'Amato DeWine Domenici Enzi Faircloth Frist Gorton Gramm Gregg Hagel Hatch	Helms Hutchison Inhofe Kempthorne Kyl Lott Lugar Mack McCain McConnell Murkowski Nickles Roberts Santorum Sessions Shelby Smith, Bob Smith, Gordon Snowe Stevens Thomas Thompson Thurmond Warner	Biden Bingaman Breaux Cleland Conrad Daschle Dodd Dorgan Ford Graham Hollings Inouye Kerrey Landrieu Levin Lieberman Mikulski Moynihan Murray Reed Reid Robb Sarbanes Torricelli	1—Offici 2—Neces 3—Illnes 4—Other SYMBOI AY—An	LS: nounced Yea nounced Nay red Yea

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that the F-22 would require 1,400 hours of flight testing, which sounded reasonable to us. In May of 1997, they cut that number to just 601 hours. Now they are saying that only 183 hours is enough, and the Defense Authorization Bill before us endorses that low number. Each F-22 aircraft will cost \$182 million, which is three times more than any aircraft the United States has ever purchased. We think that it is extremely risky to agree to buy such expensive planes after they have been tested for so few hours. If we do, we may very well end up spending \$60 billion on aircraft that have serious design defects. The Bumpers amendment offers a reasonable compromise. It would delay advance procurement for the first six planes that we buy until F-22 flight test vehicles have completed at least 601 hours of testing. That number would still be well below the average amount of time used to purchase less complicated, less expensive aircraft. We urge our colleagues to join us in supporting this prudent amendment.

## **Those opposing** the amendment contended:

Our colleagues may be surprised to hear that we largely agree with their arguments, though we, unlike they, are strong supporters of the F-22. We have seen other aircraft, including the B-1 and B-2, rushed into production with inadequate testing, and we have seen the huge problems that have resulted later when defects were found. We imposed a cost cap on the program last year in an effort to keep the program under control, and we have fought to ensure that testing takes place. We believe that the testing that will be required of the F-22 in this bill will be sufficient, and in many ways will be much more rigorous than testing of other aircraft has ever been. First, our colleagues should be aware that testing is not limited to testing of flight test vehicles. The F-22 has gone through, to date: 153 prototype flight test hours; over 365,000 equivalent flight test hours on aircraft components and subcomponents; over 23,000 hours of software/hardware integration testing; over 6,000 hours of engine testing; 600 hours of highfidelity radar cross section model testing; 450,000 hours of avionic ground tests; 123,000 hours of component structural tests; 2,000 hours of engine ground tests: 43,000 hours of wind tunnel testing; and 25,000 hours of scaled wind tunnel testing. Significantly, that last testing has shown that the plane will not have the same wing problems that the F-18E/F had, which was the major development area of concern. Much of this testing is only recently possible due to advances in technology. For lower costs, we are able to get much more testing. Even with all of the above information, we still want more assurances on the F-22's capabilities before we make any purchases. This bill will require 433 hours of testing before advance procurement for Lot II is permitted, unless the Secretary of Defense certifies that requiring that amount of testing will result in substantial additional costs that will outweigh the costs of going forward with less testing. At a minimum, though, 183 hours will have to be completed. At the same time, the total flight testing that ultimately will be done will be a huge 4,338 hours. Anytime we introduce delays in moving from engineering, to manufacturing and development, to preproduction, or to production, we introduce costs. There is always a balancing act between demanding more testing and demanding cost-containment. We support the balance that is in this bill. The early testing of the F-22 has all been positive, and the advance procurement that this bill will allow will be after some flight testing has occurred and will be only for a small number of all of the planes that will eventually be purchased. We believe that the balance achieved in this bill has the best chance of assuring that the F-22 will live up to expectations without exceeding the projected costs. We therefore must oppose the Bumpers amendment, which would add additional restrictions, and therefore additional costs.